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Ambivalent Attitudes in a Communication Process: An Integrated Model

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In a communication process that involves a target subject (what is being communicated about) and a source, existing attitudes (positive or negative) toward the target or the source influence communication effects. People also may hold ambivalent attitudes (positive and negative) toward the target or the source, but the implications of such ambivalent attitudes on communication effects remain unclear in communication research. This study tries to fill that void by exploring ambivalent attitudes toward the target and source on communication effects and proposing an integrated model to demonstrate that ambivalent attitudes encourage systematic processing (Experiments 1 and 2) and that identification with the target or the source further encourages motivated processing among ambivalent people (Experiments 3 and 4).

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Lasswell's (1948) maxim, "who says what to whom in what channel with what effect," describes a communication process. The first two important elements in the process are "who" sends the messages, or the source of the communication, and "what" is being communicated, or the subject target of the communication. Yet this communication process does not take place in a vacuum: The audience, those to "whom" messages are delivered, also exhibit differences that affect their responses to what is being communicated and thus alter the "effect" of the communication. For example, prior research has explored message receivers' existing attitudes toward the target and the source and demonstrated their influences on communication effects (Feng & MacGeorge, 2010; Knobloch-Westerwick & Meng, 2009).

Such investigations treat existing attitudes as a bipolar concept (positive or negative), but in a communication process through mass media, people's attitudes toward the target (e.g., controversial issues discussed in news broadcasts, institutions or corporations profiled in news magazines, and products/candidates endorsed by ads) and the source (e.g., politicians commenting on an issue, persons endorsing political candidates, and celebrities endorsing products in ads) are often ambivalent.

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Yet surprisingly little communication research or theory considers how people respond to media messages about issues toward which they feel ambivalent or messages endorsed by sources about whom they feel ambivalent.

The very idea of reciprocal positive and negative evaluations, in which object evaluations consist of a single, bipolar system ranging from very unfavorable to very favorable, has been subject to challenge for more than 40 years (e.g., Kaplan, 1972; Scott, 1968) and received attention from attitude researchers (e.g., Cacioppo, Gardner, & Bernston, 1997; Priester & Petty, 1996), who argue that positive and negative evaluations might coexist independently. More extreme positive and negative evaluations of an object likely lead to increasingly ambivalent attitudes toward that object. People with such ambivalent attitudes also respond to information differently than do those with univalent attitudes, according to two main streams of research.

The first stream suggests that ambivalent people are subject to persuasion effects, because ambivalent attitudes are associated with discomfort (Monteith, 1996). This discomfort makes them eager to change their attitudes in directions consistent with the new information they receive, and such motivated processing generates response amplification effects (Bell & Esses, 2002; MacDonald & Zanna, 1998). The second stream indicates instead that because ambivalent people are less confident in their attitudes, they are motivated to engage in systematic processing and change their attitude only when message arguments are strong (Armitage & Conner, 2000; Hodson, Maio, & Esses, 2001; Jonas, Diehl, & Bromer, 1997).

The two lines of findings thus conflict: The former suggests that when people feel ambivalent, persuasion effects emerge in all conditions (motivated processing), whereas the latter implies that persuasion effects emerge only when message quality is high (systematic processing). This article tries to reconcile their inconsistency for ambivalent people by proposing an integrated model that circumscribes the conditions in which motivated or systematic processing emerges. Specifically, systematic processing represents the default processing model for ambivalent people (Experiments 1 and 2), but when ambivalent people feel extremely uncomfortable (e.g., strong identification), they instead engage in motivated processing (Experiments 3 and 4). In a communication process, people could feel ambivalent toward the target of the communication, as well as the source of that communication, but prior research focuses only on attitudes toward the target. Missing from the extant literature on ambivalent attitudes and persuasion is a discussion of whether ambivalent attitudes toward the message source might trigger similar effects. To understand the roles that ambivalent attitudes play in a communication process, this article explores the influence of ambivalent attitudes toward the target (Experiments 1 and 3) together with that of ambivalent attitudes toward the source (Experiments 2 and 4).

Ambivalence and persuasion: An integrated model

Positive and negative evaluations of an object are not necessarily related and can be independent (Kaplan, 1972; Scott, 1968). Depending on their relative degree,

attitudes thus can be categorized as ambivalent, univalent (whether dominantly positive or negative), or indifferent (Kaplan, 1972). Two separate research streams address the question of how ambivalent attitudes toward a target might influence the persuasive effects of information about that target. The first stream reveals that ambivalent attitudes are more strongly influenced by persuasion than are univalent (either positive or negative) attitudes. The explanation for this finding suggests that inconsistent or ambivalent attitudes cause undesirable tension (Monteith, 1996), which motivates people to alter their attitudes to reduce their discomfort (Bell & Esses, 2002). As a result, they show response amplification and change their attitudes in directions that accord with the valence of the new information (Bell & Esses, 2002; MacDonald & Zanna, 1998). In other words, by responding to positive and negative information about the ambivalent target in a consistent manner, they can reduce the salience of ambivalence and thus its associated discomfort. For example, people with ambivalent attitudes toward native Americans generated more favorable responses when reading positive as opposed to negative essays about them, whereas univalent people did not express any significant differences (Bell & Esses, 2002). Such response amplification effects among ambivalent people become even more enhanced when they are manipulated to believe that feeling ambivalent is bad (Bell & Esses, 2002). Nordgren, van Harreveld, and van der Plight (2006) even demonstrate that among consumers made to feel ambivalent by reading a mixed valence article about genetically modified food, those manipulated to attribute their ambivalence to themselves as opposed to external factors experience more intense discomfort and engage in more motivated processing by generating more one-sided thoughts.

Another research line suggests instead that response amplifications are not universal but rather depend on information quality. People with ambivalent attitudes toward an object may be less confident of their attitudes, and the gap between their desired and actual confidence motivates them to engage in systematic processing (Jonas et al., 1997). This claim is consistent with the heuristic and systematic model (HSM) that suggests people elaborate on messages if they lack confidence in their judgments. With the HSM, Jonas et al. find that when participants read both positive and negative information about a product, they feel ambivalent toward it, experience less confidence in their attitudes, and are motivated to engage in systematic processing by elaborating on the messages. When people perform this message elaboration, strong arguments are more likely to change their attitudes than are weak arguments. Maio, Bell, and Esses (1996) demonstrate that the attitudes of participants who feel ambivalent toward a minority group thus are more affected by strong than by weak arguments, whereas for those who feel univalent, attitudes do not vary as a function of argument strength.

To reconcile these two lines of findings, this study proposes a model (Figure 1) to identify situations in which each finding is likely to emerge. The model predicts that systematic processing is the default processing mode for ambivalent people, because they lack attitude confidence. Ambivalent people usually are motivated to engage in systematic processing, such that they scrutinize message quality or argument

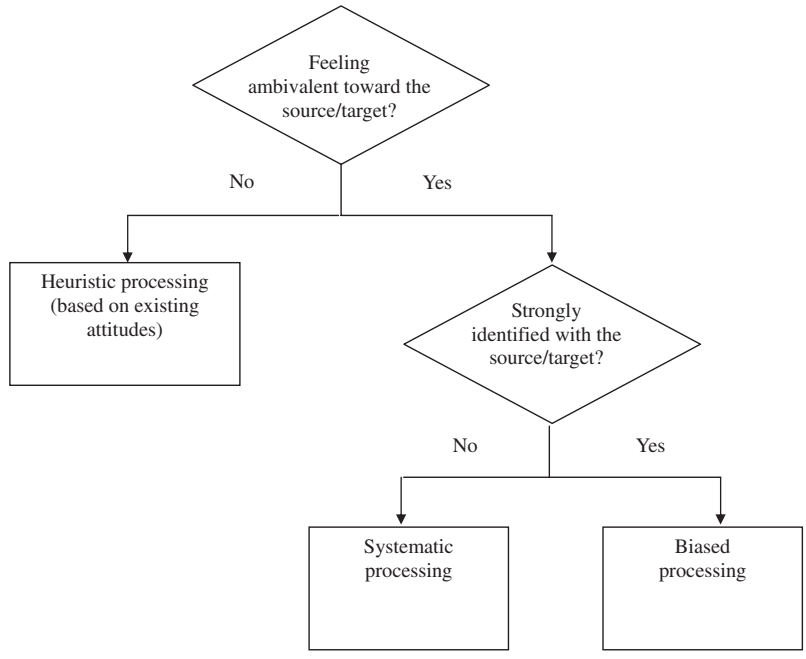

Figure 1 Proposed model.

strength. Yet when people also feel particularly uncomfortable about their ambivalent attitudes (e.g., because they identify with the attitude object, whether a social group, organization, or celebrity), they are more motivated to reduce discomfort. Therefore, when they read new information, they should engage in motivated reasoning and shift their attitudes in accordance with message valence, regardless of message quality.

Prior research focuses on attitudes toward the target; it is not clear whether ambivalence toward a source influences persuasion in a similar way. A review of the persuasion literature suggests two similarities though: First, when people are uncertain about a *target* issue (Hodson & Sorrentino, 2003), they engage in systematic processing, as they do when they feel uncertain about the message *source* (Ziegler, Diehl, & Ruther, 2002). Second, when people are committed to a *target* issue (Vallone, Ross, & Lepper, 1985) or support a message *source* (Arpan & Raney, 2003), they engage in motivated processing. Such similarities offer some support for the proposition that ambivalent attitudes toward a target and a source could trigger similar processes.

Systematic processing: Ambivalence in a communication process

Ambivalence toward what is being communicated

In a media-mediated process, people may feel ambivalent toward a *target*, be it a person, issue, or institution. With the exception of Maio et al. (1996), no existing

ambivalent attitude research focuses on information transmitted by mass media; this article therefore specifically tests the influence of ambivalent attitudes toward what is being communicated in a media context (i.e., online news) to address this gap. The proposed model suggests that the default mode of processing triggered by ambivalent attitudes is systematic processing (superior effects of strong vs. weak arguments), not response amplifications (significant attitude changes across all argument strength conditions). Because ambivalent people adopt a systematic mode of processing characterized by close scrutiny of message quality, strong arguments should generate more favorable responses than weak arguments. In contrast, argument strength does not affect univalent people, who do not adopt a systematic mode of processing. Because people have existing attitudes toward the target being discussed, the degree of attitude changes, rather than postexposure attitudes, provides the indicator of persuasion effects. Thus, this study predicts an interaction effect:

H1: For people who feel ambivalent toward a target featured in the news, strong arguments generate more favorable attitude changes than weak arguments. For those who feel univalent toward it, argument strength does not affect attitude changes.

Ambivalence toward the source of communication

People may also feel ambivalent toward the *source* of information in mass media (e.g., officials commenting on issues and celebrities endorsing products). Yet no extant research explores the influence of ambivalent attitudes toward information source. To address this research gap, this study examines the effects of ambivalent attitudes toward a celebrity endorser on evaluations of the products that he or she endorses.

The risks of using celebrities as endorsers are widely acknowledged (Louie, Kulik, & Jacobson, 2001; Till & Shimp, 1998). When celebrities are involved in scandals, reports of substance abuse, or unlawful behavior, they can cause embarrassment to advertisers and the endorsed brands (Till & Shimp, 1998). Even if advertisers terminate their contract with celebrities after a scandal to reduce damages, many celebrities possess specific talents or expertise that remains widely appreciated, so they often get hired later to endorse other products (e.g., Kobe Bryant and Martha Stewart). People's attitudes toward such celebrities likely are ambivalent, rather than univalently positive. Therefore, celebrity endorsers represent good candidates for examining the effects of source ambivalence.

According to the proposed model, ambivalent attitudes lead to systematic processing, which may occur when people feel ambivalent toward the source. That is, when they evaluate ad messages or products, people who feel ambivalent, as opposed to univalent, toward a source lack confidence in their attitudes and should be more motivated to engage in systematic processing by undertaking more extensive elaboration of the endorsed messages and thus adopting divergent attitudes depending on the strength of the argument. Source effect research usually examines attitudes toward the advocated message or issue as indicators of persuasion effects (Wilson &

Sherrell, 1993). Therefore, the predicted interaction effects feature attitudes toward the endorsed ad and brand.

H2: Strong arguments generate more favorable (a) ad attitudes and (b) brand attitudes than weak arguments only when individuals feel ambivalent toward the endorser.

The HSM, which predicts different processes when people are motivated as opposed to unmotivated to elaborate on messages, offers a foundation for predictions about attitude formation processes. Specifically, when people who feel ambivalent toward a celebrity are motivated to elaborate on messages, argument strength influences their evaluation of the ads and advertised brands (systematic processing). In contrast, when people feel univalent toward the celebrity endorser, they should have greater confidence in their attitudes. They rely on their existing attitudes toward the celebrity as judgment inputs (heuristic processing: "the product endorsed by likable endorsers should be good") and are not motivated to elaborate on the messages. As a result, existing attitudes toward the celebrity, but not argument strength, influence their evaluation of the ad and the brand. To the degree that they like the endorser, they evaluate the ad and brand more favorably. The process by which ambivalent and univalent people form their evaluations thus may differ, as follows:

H3: Argument strength predicts brand attitudes when one feels ambivalent toward the endorser, whereas existing endorser attitudes predict brand attitudes when one feels univalent.

Experiments 1 and 2

Experiment 1 employs a pre-/postdesign to test H1 by exploring the influence of ambivalent attitudes toward a communicated *target*. Specifically, it tests the impacts of ambivalent attitudes toward an institution on attitude change when participants read a news article about that institution. In relation to H2 and H3, Experiment 2 examines the influence of ambivalent attitudes toward a message *source*. Specifically, it examines the impact of ambivalent attitudes toward a celebrity on consumers' responses to an ad and the product endorsed by that celebrity.

There are two recognized approaches to assess ambivalence (Priester & Petty, 2001). One approach asks participants to provide separate ratings of their positive and negative attitudes toward a target (Kaplan, 1972), then enters those ratings into a formula that produces an index of attitude ambivalence (hereafter, Kaplan's approach; Table 1). The second approach instead asks participants to indicate directly the degree of ambivalence they feel toward a target (e.g., Sparks, Hedderley, & Shepherd, 1992; Tourangeau, Rasinski, Bradburn, & D'Andrade, 1989). This approach (hereafter, subjective ambivalence approach) relates to psychological experiences. Several studies support the predictive validity of both measurement approaches as indicators of ambivalence (Bargh, Chaiken, Govender, & Pratto, 1992), and the ambivalence indexes derived from these two approaches correlate positively across studies (Priester

Table 1 Ambivalence Scores Based on Griffin's Formula: $(P + N)/2 - |P - N|$

Negativity \ Positivity	1[a]	2	3	4
1[b]	1	0.5	0	−0.5
2	0.5	2.0	1.5	1.0
3	0	1.5	3.0	2.5
4	−0.5	1.0	2.5	4.0

Note: In Experiment 2, the scores were used for the manipulation check. Among the 16 possible combinations, the gray area generally indicates ambivalent attitudes.

[a]Participants rated the following positive item: "Considering only the positive qualities of the celebrity and ignoring his/her negative qualities, please indicate how positive his/her positive qualities are on the following 4-point scale: (1) *not at all positive*, (2) *slightly positive*, (3) *quite positive*, and (4) *extremely positive*."

[b]Participants rated the following negative item: "Considering only the negative qualities of the celebrity and ignoring his/her positive qualities, please indicate how negative his/her negative qualities are on the following 4-point scale: (1) *not at all negative*, (2) *slightly negative*, (3) *quite negative*, and (4) *extremely negative*."

& Petty, 1996). Experiment 1 therefore adopts the subjective ambivalence approach, whereas Experiment 2 uses the subjective ambivalence approach to categorize participants and Kaplan's approach for the manipulation checks.

Method for Experiment 1

Design

The experiment featured a 2 × 2 between-subjects factorial design, with argument strength manipulated (strong vs. weak) and existing attitude ambivalence measured and categorized (ambivalent vs. univalent). The participants read news reports with strong or weak arguments about the university that they attended, toward which they felt either ambivalent or univalent.

Participants, procedures, and stimuli

A university located in Taiwan sent a recruitment ad in an e-newsletter to all registered students, which attracted 120 students to participate (48.3% male); they were paid NT$100 for their participation. When they signed up for the study by clicking on a link in the e-newsletter, they immediately entered a short online survey that asked about their attitudes and ambivalence toward their university and other filler institutions, as well as provided potential time slots for their experimental participation. When they came to a research lab at their chosen, enrolled time to complete the main experiment, they were told that the research pertained to how people would process information in a newly launched student e-newsletter featuring news about college campuses nationwide. They were then asked to view a feature article (with strong or weak arguments) about events on their campus. The article featured information supporting the school with regard to

three issues—a newly remodeled campus cafeteria, a fee for dormitory use, and the rights of custodians—that had sparked criticism of the school. In line with Petty and Cacioppo's (1979) definitions of argument strength, the strong arguments provided substantiated information, whereas the weak arguments offered only unsubstantiated information. After participants read the news, they answered questions online.

Independent variables

Ambivalent attitudes. In the initial recruitment survey, participants rated their subjective ambivalence toward their university on a 7-point Likert scale from Priester, Petty, and Park (2007), with four items: "My reactions toward the university were mixed," "I felt ambivalent toward the university," "I felt tension in my thoughts and feelings about the university," and "I felt conflicted in my reactions to the university" (Cronbach's $\alpha = .87$). One scale item, "I experienced behavioral indecision," did not apply in this context and therefore was not included. Participants then could be categorized into ambivalent and univalent groups, based on the midpoint of the scale (=4).

Argument strength. Participants rated the news on Dillard, Weber, and Vail's (2007) 7-point Likert scale, with items such as "the information provided is logical" and "the reasoning used is sound" (Cronbach's $\alpha = .93$). An analysis of variance (ANOVA) revealed that the strong argument story (4.64, $SD = 0.76$) led to higher scale ratings than the weak argument story (3.52, $SD = 0.90$), $F(1, 53) = 53.01$, $p < .01$, $\eta_p^2 = 0.53$.

Dependent measure: Attitude change

On a 7-point Likert scale, participants rated their general attitudes toward their university using three items from a brand attitude scale (Miniard, Bhatla, Lork, Dickson, & Unnava, 1991), with the wording altered to fit the study (e.g., "I like the university," "I feel positive toward this university," and "I feel favorable toward this university"). They completed this scale twice, first when they signed up online for the study (Cronbach's $\alpha = .96$) and then after they read all stimuli (Cronbach's $\alpha = .92$). Subtracting the prestudy ratings from the poststudy ratings produced the attitude shift scores, such that positive scores indicated a positive attitudinal shift, whereas negative scores indicated a negative shift.

Analyses and results

ANOVA showed that the two-way interaction between argument strength and attitude ambivalence on attitude change was significant, $F(1, 116) = 10.06$, $p < .01$, $\eta_p^2 = 0.08$, observed power = 0.88. Argument strength influenced attitude change among ambivalent participants (Table 2) but not among univalent participants. These results supported H1. Moreover, there was no main effect of attitude ambivalence, $F(1, 116) = .03$, $p = .87$, $\eta_p^2 < 0.01$. This finding argued against the possibility that response amplification was the default effect and offered additional support for the proposed contingent model.

Table 2 Summary of Cell Means for the Proposed Interaction and Results of Simple Effect Analyses

		Strong Arguments Mean (*SD*)	Weak Arguments Mean (*SD*)	Simple Effects
Experiment 1 (H1)				
Attitude change	Ambivalent	0.36 (0.81) [5.47 (0.91)–5.11 (1.03)] ($N = 30$)	−0.36 (0.96) [4.93 (1.10)–5.29 (1.10)] ($N = 30$)	$F = 9.66, p < .01$ $\eta_p^2 = 0.14$ Power = 0.86
	Univalent	−0.11 (0.52) [5.84 (0.96)–5.95 (0.98)] ($N = 30$)	0.07 (0.72) [5.77 (1.15)–5.70 (0.94)] ($N = 30$)	$F = 1.20, p = .28$ $\eta_p^2 = 0.02$ Power = 0.19
Experiment 2 (H2a and H2b)				
Ad attitudes	Ambivalent	4.04 (0.78) ($N = 16$)	3.18 (0.91) ($N = 11$)	$F = 6.92, p < .01$ $\eta_p^2 = 0.22$ Power = 0.72
	Univalent	2.90 (1.01) ($N = 18$)	3.28 (1.37) ($N = 26$)	$F = 0.98, p = .33$ $\eta_p^2 = 0.02$ Power = 0.07
Brand attitudes	Ambivalent	4.30 (0.69) ($N = 16$)	3.53 (0.80) ($N = 11$)	$F = 7.23, p < .01$ $\eta_p^2 = 0.22$ Power = 0.73
	Univalent	3.52 (1.24) ($N = 18$)	3.38 (1.19) ($N = 26$)	$F = 0.14, p = .71$ $\eta_p^2 < 0.01$ Power = 0.16

Table 2 Continued

		Strong Arguments Mean (*SD*)	Weak Arguments Mean (*SD*)	Simple Effects
Experiment 3 (H4b)				
Attitude change	Ambivalent weak identifiers	0.49 (0.95)	−0.39 (1.46)	$F = 5.15, p = .03$
		[5.04 (0.85)–4.55 (1.09)]	[4.37 (1.48)–4.76 (1.50)]	$\eta_p^2 = 0.12$
		($N = 21$)	($N = 18$)	Power = 0.60
	Univalent weak identifiers	0.21 (0.82)	0.21 (0.42)	$F = 0.01, p = .98$
		[4.70 (0.98)–4.49 (1.14)]	[5.17 (0.95)–4.96 (1.22)]	$\eta_p^2 < 0.01$
		($N = 21$)	($N = 19$)	Power = 0.05
Experiment 4 (H5a–H5d)				
Ad attitudes	Ambivalent weak identifiers	4.19 (1.04)	3.25 (1.05)	$F = 7.92, p < .01$
		($N = 19$)	($N = 20$)	$\eta_p^2 = 0.18$
				Power = 0.78
	Ambivalent strong identifiers	4.39 (1.18)	4.55 (.86)	$F = 0.27, p = .60$
		($N = 23$)	($N = 23$)	$\eta_p^2 = 0.01$
				Power = 0.08
Candidate attitudes	Weak identifiers	4.42 (1.16)	3.33 (1.15)	$F = 8.61, p < .01$
		($N = 19$)	($N = 20$)	$\eta_p^2 = 0.19$
				Power = 0.82
	Strong identifiers	4.43 (0.89)	4.55 (0.81)	$F = 0.21, p = .65$
		($N = 23$)	($N = 23$)	$\eta_p^2 = 0.01$
				Power = 0.07

Note: "Power" in this table refers to observed power.

Method for Experiment 2

Design

This experiment featured a 2 × 2 between-subjects factorial design. The manipulated factor was product claim strength (strong vs. weak), and the participants were categorized as either ambivalent or univalent toward the celebrity endorser.

Participants, procedures, and stimuli

The recruitment procedure was similar to that for Experiment 1: 92 participants (43.5% male) from a university in Taiwan responded to a recruitment ad in the school's e-newsletter and were paid for their participation. They answered a short survey online, in which they rated their ambivalence toward the target celebrity and other filler celebrities (using both subjective ambivalence items and Kaplan's positive and negative items). Through this process, they enrolled and came to a research lab to complete the experiment.

On their arrival, they were asked to read a filler ad for a watch, followed by the stimulus advertisement featuring a mobile phone endorsed by a celebrity. The ad copy suggested that the mobile phone, with the fictitious name "ASP," recently had been imported from abroad and launched in the home market. The celebrity appeared in the center of the ad, and the ad copy suggested that he used and liked the featured product. The copy and layout of the ads remained constant across all conditions, with the exception of the product claims, as described next.

Two pretests provided the input for selecting the celebrity endorser. In the first pretest, 10 graduate students listed celebrities toward whom they felt ambivalent. The three celebrities who appeared most frequently then served as the focus of the second pretest ($N = 31$), which measured ambivalence according to Kaplan's (1972) approach and Griffin's formula (Thompson, Zanna, & Griffin, 1995; see Table 1). The celebrity toward whom a roughly equal number of participants felt ambivalent and univalent then became the target celebrity for this study. The selected celebrity was a talk-show host respected for his profound knowledge but notorious for his outspokenness and audacity.

Depending on the conditions to which a participant was randomly assigned, the ad featured either strong or weak product claims. Following Petty, Cacioppo, and Schumann (1983), the argument strength manipulation involved product claims that varied in importance. In a pretest ($N = 35$), participants rated the importance of a list of mobile phone attributes on a 7-point Likert scale. The strong argument ad contained product claims that participants considered important for purchasing mobile phones (good design, $M = 5.91$, $SD = 1.10$; built-in high-pixel camera, $M = 5.71$, $SD = 1.32$; quick repair service, $M = 5.57$, $SD = 1.24$). Because it would not be realistic for ads to feature extremely unimportant product claims, the weak argument contained claims that participants rated as less important but not inconsequential (two display windows, $M = 4.31$, $SD = 1.49$; exchangeable front and back covers, $M = 4.26$, $SD = 1.44$; clamshell design, $M = 4.00$, $SD = 1.57$). After

reading the ad, participants completed measures assessing their attitudes toward the brands featured in the ads.

Independent variables

Ambivalence toward the celebrity. This experiment used subjective ambivalence to categorize participants into ambivalent and univalent groups and Kaplan's approach to confirm the effectiveness of the categorization. In the pre-exposure online survey, participants rated their subjective ambivalence on Priester and Petty's (2001) scale (Cronbach's $\alpha = .84$), with the following items: "My attitudes toward the celebrity are conflicted" and "My attitudes toward the celebrity are not mixed" (R). According to the categorization based on their averaged subjective ambivalence values, 27 participants scored above the scale midpoint of 4 (ambivalent), whereas 44 participants with ratings below 4 were categorized as univalent. The data from 21 participants with a rating of exactly 4 were removed from the analyses. A one-way ANOVA revealed that the categorized ambivalent and univalent participants differed significantly in their ambivalence scores, $F(1, 69) = 18.24$, $p < .01$, $M_{\text{ambivalent}} = 2.07$, $SD = 1.13$; $M_{\text{univalent}} = 0.80$, $SD = 1.28$. The categorization, thus, was satisfactory.

Argument strength. The participants in the main experiment rated the importance of a list of product attributes. According to the *t* tests used to compare the average ratings of the three important ($M = 5.71$, $SD = 0.81$) and three less important ($M = 3.63$, $SD = 1.10$) attributes, they differed significantly, $t(91) = 16.48$, $p < .01$. The manipulation therefore was satisfactory.

Existing attitudes toward the celebrity. In the preexposure online survey, participants indicated on a 7-point Likert scale how much they liked the celebrity with two items: "In general, I like this person" and "In general, my attitudes toward this person are favorable" (Cronbach's $\alpha = .93$).

Dependent measure

Participants rated their *ad attitudes* on Chang's (2005) five-item scale (e.g., "the ad is favorable"; Cronbach's $\alpha = .87$) and *brand attitudes* using Chang's (2002) five-item scale (e.g., "I find this product likable"; Cronbach's $\alpha = .82$).

Results and analyses

A boxplot identified one outlier for ad attitudes. Excluding this outlier produced similar findings, but with less power. Therefore, the analyses did not exclude this outlier. The interaction between argument quality and ambivalence on ad attitudes was significant, $F(1, 67) = 5.03$, $p = .03$, $\eta_p^2 = 0.07$, observed power = 0.69. Simple effects tests showed that for ambivalent participants, strong arguments generated more favorable ad attitudes than weak arguments (Table 2). However, for univalent participants, the difference was not significant. These results supported H2a.

Even though the interaction between argument quality and ambivalence on brand attitudes was not significant, $F(1, 67) = 1.46$, $p = .23$, $\eta_p^2 = 0.02$, observed

power = 0.56, the results of the simple effects tests were consistent with the predictions of H2b. For ambivalent participants, strong arguments generated more favorable brand attitudes than weak arguments, whereas for univalent participants, the difference was not significant.

Moreover, there was no main effect of attitude ambivalence on ad attitudes, $F(1, 67) = 3.01$, $p = .09$, $\eta_p^2 = 0.04$, and brand attitudes, $F(1, 67) = .76$, $p = .39$, $\eta_p^2 = 0.01$. This finding argued against the response amplification effects and supported the proposed model.

In two regression analyses designed to test H3, the strong argument condition was coded "1" and the weak-argument condition was coded "0." For those in the ambivalent group, when brand attitudes were regressed on argument strength and existing attitudes, strong arguments accounted for significant variance in brand attitudes, $\beta = .47$, $p = .01$, whereas existing attitudes did not, $\beta = .19$, $p = .29$, $R^2 = .26$, as expected. The second analysis, run on participants in the univalent group, revealed that strong arguments did not predict brand attitudes, $\beta = .06$, $p = .70$, but existing attitudes did, $\beta = .38$, $p = .01$, $R^2 = .15$. Thus, H3 was supported.

Discussion of Experiments 1 and 2

When participants felt ambivalent toward the communicated topic, they engaged in message elaboration, as indicated in their divergent responses to news with strong and weak arguments. In contrast, when they felt univalent, their attitude change did not vary as a function of argument strength. Similar processing differences emerged when participants felt ambivalent as opposed to univalent toward a message source. For ambivalent participants, strong arguments led to more favorable ad and brand attitudes than did weak arguments. In contrast, argument strength did not influence ad and brand attitudes among univalent participants. For this group, existing attitudes toward the celebrity before their ad exposure predicted their brand attitudes. The findings of Experiment 2 thus extend prior research by demonstrating that people who feel ambivalent toward the *source* of persuasive information also engage in systematic processing.

Both these experiments have examined ambivalent attitudes in a mass media setting and provided support for the argument that ambivalent attitudes trigger systematic processing. However, the integrated model predicts that in situations in which people feel uncomfortable about their ambivalent attitudes, they are motivated to reduce that discomfort by engaging in biased processing and changing their attitudes in accordance with message valence, regardless of message quality. The following two experiments examined this prediction by testing the degree of identification as the moderator.

Motivated processing: Identification as a moderator

Identification refers to a perception of belongingness or connection to a social group (Tajfel & Turner, 1985), an organization (e.g., Mael & Ashforth, 1992), or even a

person (Basil, 1996). Identification with a person, such as a celebrity, occurs when perceptions of that person fit how people perceive, or would like to see, themselves (Bandura, 1986) or when they adopt self-defining attitudes and values from the example provided by the person or share attitudes and values with that person (Kelman, 1961). According to Mael and Ashforth, perceptions of belongingness can be actual or symbolic (i.e., "I am a Harvard student" and "I am a supporter of President Obama") and shaped by real encounters or established through mass media (Basil, 1996).

Identification thus reflects shared values and helps define a person's self-concepts (Cheney, 1983; Cohen, 2001). People identify partly to enhance their self-concepts (Abrams & Hogg, 1988), which explains why they usually identify with valued celebrities (Adams-Price & Greene, 1990) or a distinguished organization (Mael & Ashforth, 1992). However, identification based on a perceived similarity or shared fate (Mael & Ashforth, 1992) can be destructive or painful if people find that their identifier has failed in some way (Turner, 1981). Similarly, a sense of belongingness can be threatened if people encounter counterattitudinal information regarding a group or person with which they identify. For example, Americans who strongly identify with their country but have antiwar sentiments might have developed ambivalent attitudes toward their nation when the United States invaded Iraq. People who voted for President Obama and developed a strong identification with him may read critical commentary about his performance that makes them feel ambivalent toward him. A group or person with prestige or distinctiveness can attract high identification (Mael & Ashforth, 1992) and it is possible for strong identifiers to develop ambivalent attitudes toward the target of their identification.

Yet identification with a group/person and a feeling of ambivalence toward it is an uncomfortable state, which may encourage motivated or biased processing of messages about the ambivalent target or messages advocated by an ambivalent source. Those who strongly identify with a group/person likely have a stronger attitudinal commitment (Mael & Tetrick, 1992). People with strong attitudinal commitment respond to persuasive information about that group/person differently than do those with weak commitment; for example, they are more likely to engage in motivated reasoning (Ahluwalia, Burnkrant, & Unnnava, 2000; Raju & Unnava, 2006).

Motivation can encourage self-serving reasoning (Kunda, 1987, 1990), because people motivated to arrive at a preferred conclusion rely on messages that help yield that conclusion. Such persons also apply less stringent criteria to evaluate new information that supports their positions. Motivated reasoning may be more likely when people feel aroused (Raju & Unnava, 2006) or experience attitudinal inconsistency (Jain & Maheswaran, 2000). In the same way, attitudinal ambivalence should encourage motivated reasoning, especially when people identify strongly with the source or target toward which they feel ambivalent.

As both Experiment 1 and prior research have shown, when they feel ambivalent, people engage in systematic processing. However, in-depth processing does not eliminate the self-serving bias generated by motivation (Kunda, 1990; Lundgren

& Prislin, 1998). When people who identify strongly with a target begin to feel ambivalent toward it (i.e., through exposure to negative information), they grow eager to reduce their ambivalence by engaging in motivated reasoning. This motivation may apply in situations in which people feel ambivalent toward the target or the message source.

Identification with the target

This study predicts that when people, due to exposure to negative information, become ambivalent about a target that they strongly identify with, they are eager to reduce their discomfort and engage in motivated reasoning. If they encounter new information about the target that supports their original attitudes and relieves their discomfort, they should elaborate on those messages in a biased way and accept them easily, regardless of argument quality. When they do not feel ambivalent, people who identify strongly with the issue should not be motivated to engage in message elaboration or motivated reasoning, and thus, they should not experience significant attitude change. In contrast, if people weakly identify with a target and feel ambivalent about it, they should engage in systematic processing and scrutinize the strength of the argument. Their attitudes then change only if the new information presents a strong argument. If they do not feel ambivalent, these people do not adopt systematic processing and should respond the same way to the message, regardless of the strength of its argument.

H4a: For people who identify strongly with a target, exposure to new information results in a positive attitude change when they feel ambivalent toward the target but not when they feel univalent.

H4b: For people who identify weakly with a target, exposure to new information with strong, as opposed to weak, arguments results in a positive attitude change when they feel ambivalent but not when they feel univalent.

Identification with the source

Similarly, when ambivalence arises about a source, people who identify strongly with that source should be more likely to engage in motivated processing to reduce their discomfort. As a result, they should generate equally favorable attitudes toward the target that the source endorses, regardless of the strength of arguments. In contrast, ambivalent people who do not identify strongly with the source may generate favorable attitudes toward the target only when the arguments are strong. In election campaigns, for example, political figures commonly endorse another political candidate. Therefore, to test these predictions, this experiment used the context of political advertising. Biased effects should emerge when people formulate attitudes toward the ad, as well as attitudes toward the candidate being endorsed.

H5: For ambivalent people who identify strongly with the source (endorser), argument strength in the ad does not affect their attitudes toward (a) the ad and (b) the endorsed candidate, whereas for ambivalent people who identify weakly with the source, ads

with strong, as opposed to weak, arguments result in more positive attitudes toward (c) the ad and (d) the endorsed candidate.

Moreover, this study examines two different attitude formation processes for strong and weak identifiers. Specifically, those who identify strongly with the source should be more likely to evaluate the target (endorsed candidate) in accordance with their existing attitudes toward the source, in an exemplar of biased processing. As a clear contrast, those who identify weakly with the source should evaluate the endorsed candidate on the basis of the strength of the ad endorsement.

H6: When a person feels ambivalent toward an endorser, existing endorser attitudes, but not argument strength, predict strong identifiers' attitudes toward the candidate. In contrast, argument strength, but not existing endorser attitudes, predicts weak identifiers' attitudes toward the candidate.

Overview of Experiments 3 and 4

The participants recruited for Experiments 3 and 4 held positive attitudes toward the target or source. Experiment 3 either primed ambivalent or univalent attitudes by exposing participants to a negative or neutral article about the target, whereas Experiment 4 recruited only participants who had positive attitudes toward the source and primed all of them to feel ambivalent by asking them to read a negative article about the source. This priming procedure rendered the negative evaluations of the target or source accessible.

Experiment 3 employed a pre-/postdesign to test H4 and explored the moderating role of identification in situations in which people were made to feel ambivalent toward the target. It exposed participants to either neutral or negative news (to induce ambivalence) about an institution and examined how identification with the institution moderated the interaction between attitude ambivalence and the argument strength of new information on attitude changes.

For the test of H5 and H6, Experiment 4 considered the moderating role of identification in situations in which people were made to feel ambivalent toward the source. All participants were primed to feel ambivalent toward a politician through exposure to negative news about him. Then it was possible to examine how identification with the politician influenced the effects of a political ad, in which the politician endorsed a political candidate in a local race.

Method for Experiment 3

Design

The experiment featured a $2 \times 2 \times 2$ between-subjects factorial design. The attitude target was the university that the participants attended, and the manipulated factors were the story prime (ambivalent vs. neutral) and argument strength (strong vs. weak). Again, participants were categorized according to their level of identification with their school.

Participants, procedures, and stimuli

Those who responded to a recruitment ad that appeared in the university's e-newsletter answered a short online survey in which they rated their attitudes toward and identification with their school. Only those with positive attitudes toward the school (mean > 4.00) were invited to come to the lab to participate in the main experiment and received payment for their participation. The final sample size was 165 participants (50.9% male). When they came to a research lab at their enrolled time, they were told that the research pertained to how people would process information in a newly launched e-newsletter featuring news about college campuses nationwide; the feature article in the e-newsletter was about their school. Both the neutral article and the one intended to prime ambivalence featured the same three issues as in Experiment 1. However, whereas the ambivalence prime article featured critical content about how badly the university had handled the issues, the neutral article reported on the events in a neutral tone.

At the bottom of the screen that showed the article, a counter indicated how many people had left comments (i.e., four), and a link appeared to click through to the next page. When they moved to the next page, a pop-up window asked the participants to rate their ambivalence and general attitudes toward their university. This method was similar to the system employed by America Online (AOL) on its news site; each news item was followed by questions asking the reader how they liked the story (e.g., thumbs up or thumbs down).

Another pop-up window then asked if they would like to read other readers' comments. All participants clicked yes and read the comments. All four comments supported the university but offered either strong or weak arguments, according to a pretest, $F(1, 232) = 75.93$, $p < .01$, $\eta_p^2 = 0.25$, $M_{strong} = 4.76$, $M_{weak} = 3.44$. Finally, the participants completed measures to assess their attitudes toward their school and the argument strength of the four comments.

Story prime. According to the same felt ambivalence scale as in Experiment 1 (Cronbach's $\alpha = .83$), the ambivalence prime story ($M = 4.48$, $SD = 1.14$) induced higher levels of felt ambivalence than the neutral story ($M = 3.66$, $SD = 1.31$), $F(1, 157) = 19.22$, $p < .01$, $\eta_p^2 = 0.11$. The interaction between the story prime and identification did not have a significant effect on felt ambivalence though, $F(1, 157) = 0.39$, $p = .53$, which suggested that the story primed the same degree of felt ambivalence, regardless of participants' identification with their university.

Independent variables

Target identification. Participants completed Mael and Ashforth's (1992) scale (Cronbach's $\alpha = .86$), including the following items: "When someone criticizes XX, it feels like a personal insult," "I am very interested in what others think about __," "When I talk about XX, I usually say 'our XX' rather than 'their XX,'" "XX's successes are my successes," "When someone praises XX it feels like a personal compliment," and "If a story in the media criticized XX, I would feel embarrassed" ("XX" indicates

the name of the university). They thus could be categorized as either high ($N = 86$) or low ($N = 79$) identifiers, based on a median split (5.83).

Comment argument strength. Participants rated the four comments using Dillard et al.'s (2007) scale, as in Experiment 1 (Cronbach's $\alpha = .93$, .94, .95, and .94 for Comments 1–4, respectively). The repeated-measures ANOVA revealed that strong argument comments led to higher scale ratings than weak argument comments, $F(1, 163) = 40.34$, $p < .01$, $\eta_p^2 = 0.20$ (overall means for the four strong and four weak comments were 4.62 and 3.74, respectively).

Dependent measure: Attitude change

Participants rated their attitudes toward their university using Miniard et al.'s (1991) scale, as in Experiment 1. They completed this scale both after reading the news story (Cronbach's $\alpha = .95$) and after reading the reader comments (Cronbach's $\alpha = .94$). Subtracting the poststory ratings from the postcomments ratings revealed the attitudinal shift scores; positive scores indicated a positive attitudinal shift and negative scores indicated a negative shift.

Analyses and results

As H4 predicted, an ANOVA revealed a significant three-way interaction among story prime, argument strength, and identification for attitude change, $F(1, 157) = 5.87$, $p = .02$, $\eta_p^2 = 0.04$, observed power = 0.67. For those who identified strongly with the university, only the effect of attitude ambivalence on attitude change was significant, $F(1, 82) = 11.85$, $p < .01$, $\eta_p^2 = 0.13$, power = 0.93, $M_{\text{ambivalent}} = 0.55$, $SD = 0.87$; $M_{\text{univalent}} = -0.02$, $SD = 0.63$. Attitude change among ambivalent participants significantly differed from 0 (no change), $t(42) = 4.15$, $p < .01$, whereas that among univalent participants did not, $t(42) = -0.16$, $p = .87$, in support of H4a.

As expected, for those who identified weakly with the school, the interaction between argument strength and story prime was significant, $F(1, 75) = 4.09$, $p = .05$, $\eta_p^2 = 0.05$, observed power = 0.80. When they were primed to feel ambivalent, strong (but not weak) arguments led to positive attitude changes (Table 2). In contrast, when they were not primed for ambivalence, argument strength did not affect attitude change. These findings supported H4b.

Method for Experiment 4

Design

The experiment featured a 2 × 2 between-subjects factorial design. The manipulated factor was argument strength (strong vs. weak), and participants were categorized according to their level of identification with the source. Unlike Experiment 3, all participants read news that primed their ambivalence.

Participants, procedures, and stimuli

In a university located in Taiwan, respondents interested in participating ($N = 379$) answered a short online survey, in which they indicated their attitudes toward and

identification with President Ma Ying-jeou. Only those who met the following criteria participated in the experiment: They were at least 20 years of age and eligible to vote ($N = 200$), they could not be from Peng-hu or have relatives living in Peng-hu ($N = 192$), they needed to have positive attitudes toward President Ma (mean > 4; $N = 144$), and their identification score should be higher than 4 or lower than the average (3.91; $N = 129$). The 129 qualified respondents received invitations to participate in the experiment, of whom 85 (49.4% male) agreed to do so. They were paid for their participation.

Participants came to a research lab to complete the experiment. They were told that the study would consist of two parts, one part about how people process information contained in online news stores and another part about how people read print advertisements. They read two articles on the Yahoo online news pages, a filler article about eBay, and then the negative priming article about President Ma. The article, selected in a pretest ($N = 120$), was a translated news story from Agence France-Presse. It was published in *Liberty Times* on August 17, 2009, and criticized the President's inability to deal with the natural disaster associated with Typhoon Morakot. After reading the articles, participants completed filler items about the article, indicated their discomfort, and responded to two scales, namely, Kaplan's positive and negative scale and subjective ambivalence, with regard to President Ma. MediaLab software (Empirisoft) measured their reaction time to Kaplan's positive and negative items.

Next, participants received a booklet containing a filler ad for shoes and the target political ad with either strong or weak arguments. The ads were for a fictitious candidate, H.Y. Hsu, running for the magistrate election of Peng-hu County, to be held on December 5, 2009. This name provoked neutral responses in a pretest ($N = 25$); in addition, Peng-hu County is a remote county that people in Taipei, where the experiment was conducted, probably did not know well. The headlines in the political ads stated that President Ma endorsed Mr. Hsu, and the main text discussed two important issues facing Peng-hu County: ecology and tourism. In line with Petty and Cacioppo's (1979) definitions of argument strength, the ads with strong arguments provided well-substantiated information about how Hsu would deal with the issues if elected, whereas the weak arguments contained only unsubstantiated information. After reading the ads, participants wrote down any *thoughts* they had when reading the target ad and then rated their attitudes toward the candidate and the ad.

Independent variables

Target identification. In an online survey, participants completed Mael and Ashforth's (1992) scale, as in Experiment 3 (Cronbach's $\alpha = .77$). Among those who participated, a median split (4.00) categorized 46 as strong identifiers and 39 as weak identifiers.

Argument strength. Participants rated the ads using the same scale as in Experiment 1 (Cronbach's $\alpha = .92$). The manipulation check was satisfactory, and the

ANOVA showed that strong arguments led to higher ratings than weak arguments, $F(1, 81) = 10.02$, $p < .01$, $\eta_p^2 = 0.11$, $M_{strong} = 4.35$, $SD = 1.01$; $M_{weak} = 3.53$, $SD = 1.35$.

Dependent measure

Participants rated their attitudes toward the candidate using Miniard et al.'s (1991) scale, as in Experiment 1 (Cronbach's $\alpha = .92$). They also rated their attitudes toward the ad using a three-item scale: "I like the ad," "the ad is pleasant," and "the ad is good" (Cronbach's $\alpha = .91$).

As an indicator of message elaboration, participants listed their thoughts when reading the ad. Two coders coded the number of thoughts. The first coder coded the thoughts of all participants, and then the second coder coded a randomly selected one fifth of the participants' responses. Their intercoder reliability was satisfactory (Holsti's method = .90; Krippendorff's $\alpha = .88$).

The assumption that underlies the prediction of motivated processing by strong identifiers is that they feel enhanced discomfort. Therefore, participants rated their evoked discomfort on Monteith's (1996) four-item discomfort scale, with items such as "I feel uncomfortable" and "I feel tense" (Cronbach's $\alpha = .85$).

Analyses and results

The priming effect was satisfactory. Participants rated how they felt about Ma after reading the news story, using a 7-point Likert scale and Newby-Clark, McGregor, and Zanna's (2002) two-item subjective ambivalence scale: "I have strong mixed emotions for Ma" and "I find myself feeling torn between liking him or not liking him" (Cronbach's $\alpha = .84$). The mean of 4.33 was significantly higher than the midpoint, $t(84) = 2.42$, $p = .02$. They also rated Kaplan's (1972) positive and negative items. The ambivalence score calculated from these items with Griffin's formula (Thompson et al., 1995) revealed a mean value of 1.49, significantly greater than 1, $t(84) = 7.63$, $p < .01$. The two ambivalence scores correlated significantly, Pearson's $r = .54$, $p < .01$. Moreover, participants in the strong and weak identification groups did not differ in their felt ambivalence, $F(1, 81) = .07$, $p = .79$, $\eta_p^2 < 0.01$, $M_{strong} = 4.36$, $SD = 1.23$; $M_{weak} = 4.29$, $SD = 1.27$, nor in their ambivalence score, according to Griffin's formula, $F(1, 81) = 1.19$, $p = .28$, $\eta_p^2 = 0.02$, $M_{strong} = 1.42$, $SD = 0.54$; $M_{weak} = 1.57$, $SD = 0.61$. Analyses of reaction time showed that the priming procedure rendered negative attitudes ($M = 6{,}880.60$ ms, $SD = 3{,}766.61$) more accessible than positive attitudes ($M = 8{,}734.15$ ms, $SD = 4{,}297.75$), $t(84) = 3.53$, $p < .01$, among participants who already had positive attitudes toward Ma.

The assumption underlying this experiment indicated that when they were made to feel ambivalent, both high and low identifiers would elaborate on the messages to the same degree, but the former would engage in motivated reasoning. An ANOVA tested this assumption and showed that ambivalent, strong ($M = 4.24$, $SD = 2.63$) and weak ($M = 4.79$, $SD = 2.32$) identifiers generated similar numbers of thoughts,

$F(1, 81) = 1.05, p = .31, \eta_p^2 = 0.01$, such that they elaborated on the ad messages to a similar degree.

The other assumption suggested that high identifiers should experience greater discomfort than low identifiers when they were made to feel ambivalent. As expected, high and low identifiers differed significantly in their evoked discomfort after reading the story designed to prime ambivalence, $F(1, 81) = 4.96, p = .03, \eta_p^2 = 0.06$, $M_{high} = 4.16$, $SD = 1.08$, $M_{low} = 3.60$, $SD = 1.22$, which explained the difference in their motivation to engage in motivated processing.

According to the ANOVA, the two-way interaction between argument strength and identification was significant for ad attitudes, $F(1, 81) = 5.94, p = .02, \eta_p^2 = 0.07$, observed power = 0.78. For those who identified strongly with President Ma, argument strength did not influence ad attitudes (Table 2). For those who identified weakly with him though, strong arguments generated more favorable ad attitudes. Therefore, the findings supported H5a and H5c.

For candidate attitudes, the two-way interaction was also significant, $F(1, 81) = 7.61, p < .01, \eta_p^2 = 0.09$, observed power = 0.67. For strong identifiers, the influence of argument strength was not significant, whereas for weak identifiers, strong arguments generated more favorable candidate attitudes. These results therefore supported H5b and H5d.

In the two regression analyses conducted to test H6, the strong argument condition was coded "1" and the weak argument condition was coded "0." For weak identifiers, when candidate attitudes were regressed on argument strength and existing attitudes toward the endorser, strong arguments accounted for significant variance in the brand attitudes, $\beta = .45, p < .01$, whereas existing attitudes did not, $\beta = .17, p = .25$ ($R^2 = .22$ for the model), as expected. The second analysis with only strong identifiers was consistent with expectations, because strong arguments did not predict their candidate attitudes, $\beta = -.02, p = .89$, whereas existing attitudes did, $\beta = .42, p < .01$ ($R^2 = .18$ for the model). Thus, H6 was supported.

Discussion for Experiments 3 and 4

Exposures to controversial information about a target (e.g., university) in the media can cause people to feel ambivalent. For participants who identified strongly with their university, an ambivalent feeling appeared to encourage biased processing, which improved their attitudes toward the target when they were exposed to new information, regardless of its argument strength. Those who strongly identified with the university but felt univalent did not undergo significant attitude changes. For people who identified weakly with the university, feeling ambivalent appeared to encourage systematic processing, such that strong new information led to greater attitude changes than weak information. Feeling univalent did not lead to systematic processing; argument strength did not affect attitude changes in that condition.

People may be exposed to mixed information about a celebrity in the media, which causes them to experience ambivalent feelings. If they identify strongly with this celebrity, the ambivalent feeling encourages biased processing; they express

indiscriminately favorable attitudes toward the endorsed candidate and the endorsed ad messages, without considering the strength of the argument provided by the source. However, when they feel ambivalent, people who identify weakly with the source engage in systematic processing and are influenced by argument strength.

General discussion

Contributions and findings

The findings of these four experiments support the proposed model. First, ambivalent attitudes encourage systematic processing, and identification with the ambivalent attitude object further triggers motivated processing. Second, in the communication process, ambivalent attitudes toward the target being communicated about and the source of that communication trigger similar effects. This research therefore adds to the extant literature in important ways. For example, it extends ambivalent attitude literature by reconciling contradictory findings through an integrated model that specifies the triggers of each mode of processing. It enhances communication literature by identifying the importance of exploring ambivalent attitudes toward the source.

In Experiment 1, when people felt ambivalent toward an institution (target), news featuring strong arguments was more effective in generating attitude changes that aligned with the valence of the article. In Experiment 2, when people felt ambivalent toward a celebrity endorser (source), ads featuring strong product claims were more effective than those featuring weak product claims in terms of generating more favorable attitudes toward the endorsed product. Ambivalent attitudes toward the celebrity were not informative when consumers evaluated the endorsed product; they needed to scrutinize product information. In contrast, when participants felt univalent toward the endorser, existing attitudes toward the celebrity were sufficient to evaluate the endorsed product, such that existing attitudes significantly predicted their product attitudes.

Moreover, Experiment 3 showed that when they felt ambivalent toward an institution (target), strongly identified participants engaged in motivated processing, and their attitudes improved significantly when they were exposed to new information, regardless of its strength. In a clear contrast, ambivalent, weakly identified people engaged in systematic processing and changed their attitudes only when the information quality was strong. Experiment 4, in the context of a political endorsement ad, revealed that when participants felt ambivalent toward the endorser (source), those who identified strongly with the endorser engaged in motivated processing and expressed positive attitudes toward the endorsed candidate, regardless of argument strength. Preexisting attitudes toward the source thus affected their attitudes toward the endorsed candidate. However, weakly identified participants engaged in systematic processing and generated more favorable attitudes toward the candidate only when ad arguments were strong.

Further research directions

Attitudes can be ambivalent; univalent positive, such that positive evaluations dominate negative ones; or univalent negative, in which negative evaluations dominate positive ones. Or people may feel indifferent—neither positive nor negative. Experiment 1 examined participants who held ambivalent or univalent attitudes toward an institution, but the majority of the latter group exhibited univalent positive attitudes. Experiment 2 also examined participants who held ambivalent versus univalent attitudes, this time toward the source, and in this case, the latter group was dominated by people with univalent negative attitudes. Additional research thus should explore whether univalent positive and univalent negative attitudes encourage different processing modes.

Experiment 3/4 recruited people who felt positively toward a target/source and primed half/all the participants to feel ambivalent by exposing them to negative information. In other words, the comparisons were limited to people who felt univalently positive and those primed to feel ambivalent. The positivity offset hypothesis proposed by Cacioppo et al. (1997) suggests that, all else being equal, when both positive and negative evaluations are accessible, positive evaluations are more readily activated than negative evaluations. When positive perceptions are readily accessible, new critical information may generate or activate existing negative perceptions and trigger ambivalent attitudes. This comparison is reasonable between the two most common situations (univalently positive and ambivalent), though examining just these conditions may limit the generalizability of the findings. Researchers should explore all possible conditions. Moreover, participants in Experiments 3 and 4 were exposed to protarget or prosource information when they were ambivalent; research also could explore people's responses to negative messages when they already are ambivalent.

People likely feel ambivalent toward many targets in a communication process, such as products in ads, issues in the news (e.g., legalization of abortion and capital punishment), or political candidates. Further research might explore additional targets, as well as additional sources, such as persons being interviewed and asked for their opinions. In addition to targets and sources, people may hold ambivalent attitudes toward the media or channel through which the information gets delivered. The way in which ambivalent attitudes toward a medium affect people's comprehension or interpretation of the news or advertisements delivered through that medium offer interesting topics to be explored.

Experiment 4 showed that the attitudes of participants who had been primed for ambivalence improved when they encountered new information. However, it is unclear whether their original positive attitudes were restored or whether they abandoned their old attitudes and adopted new ones. Attitudes toward an object may evolve over time; as Petty (2006) observes, when attitudes change in valence, people often believe they have rejected their previous attitudes without consciously experiencing any subjective ambivalence, though they still may respond to the object as if they felt ambivalent toward it. Petty calls this response "implicit ambivalence,"

as opposed to explicit ambivalence, and argues that people with implicitly ambivalent attitudes behave according to their prior (implicit) attitudes if they have little time to think. For example, people who used to love Lindsay Lohan but then developed ambivalent attitudes toward her should respond positively to her presence if they have no opportunity to elaborate on their evaluation. Petty's findings suggest the importance of distinguishing between implicit and explicit ambivalence, and further research should explore whether the two types differentially influence views of an endorsed target in various contexts.

Identification pertains to aspects of self-concepts (individual adoption of a particular group or a trait; Fleming & Petty, 2000), which distinguishes it from other constructs, such as affinity or liking. Within the proposed framework, research should explore other individual characteristics, such as moderators as well, to illustrate the idea that when people feel discomfort, they might engage in motivated processing. However, identification is an important and little explored variable, and news and media coverage often pertains to the groups, organization, or persons with which people identify or do not identify. Exploring identification thus has important practical values.

Even though it is important to distinguish people with ambivalent attitudes from those with univalent attitudes and understand their differential responses to media messages, it is not clear exactly how to assess persuasion effects using two-dimensional scales. Many researchers thus use attitudes as indicators of persuasion effects, even when they recognize explicitly that exploring persuasion effects regarding a particular issue requires that they distinguish ambivalent attitudes toward the issue from univalent attitudes (e.g., Jonas et al., 1997; Maio et al., 1996). This study adopts a similar approach, but further research should develop effectiveness measures that take into account people's ability to hold positive and negative perceptions of a target simultaneously.

Practical implications

The findings of this study have practical value for communication and advertising professionals who want to develop celebrity endorsement strategies. Because attitudes toward some celebrities may be more ambivalent than univalent, exploring the influence of ambivalence on attitudes toward endorsed issues/products is crucial. The findings of this study suggest that such celebrity endorsers should appear together with strongly persuasive messages.

In the third and fourth experiments, negative media information effectively altered attitudes from univalent positive to ambivalent, which is a common phenomenon. Scandals involving well-liked politicians or celebrities or controversial information about supported causes can spark ambivalence. In the face of such scandals, the politicians/celebrities involved often launch public relations campaigns to restore public trust. In the face of controversy about a health issue (e.g., ambivalent attitudes toward getting H1N1 flu shots), information campaigns often attempt to alter people's attitudes or opinions. Therefore, understanding

how people respond to new information when they feel ambivalent is not only academically important but it can also have practical value for marketers and public policymakers.

Limitations

The findings of this study should be interpreted with certain limitations in mind. The ads in Experiment 2 featured a fictitious brand. When ads feature a known brand, ambivalence toward the celebrity may moderate brand responses differently. For example, existing attitudes toward the brand may have a stronger effect on brand attitudes than existing attitudes toward the celebrity. In addition, Experiments 3 and 4 elicited ambivalent attitudes toward the target/source among participants who already felt overwhelmingly positive toward that target/source. It is not clear how long such ambivalent attitudes will persist. Finally, the power of some statistical analyses did not meet the .80 criteria, and dichotomizing the continuous variables into groups might have reduced power of the analyses. Readers should take these limitations into account when interpreting the findings. Yet despite these limitations, the study findings shed greater light on the role that ambivalent attitudes play in mass communications and should prove valuable for communication research.

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传播过程中的矛盾态度：其综合模型

【摘要：】

传播过程如果涉及目标主题（传达内容）和传播源，那么现有的，对主题和传播源的态度（积极或消极）会影响传播效果。人们可能对主题和传播源有矛盾的态度（积极或消极的），但在传播研究中这种矛盾态度的效果我们仍不清楚。本研究试图填补这一空白，探索对主题和传播源的矛盾态度的一个综合模型，并由此指出：矛盾态度鼓励系统处理（实验 1 和 2）；如果有矛盾态度的人与主题和传播源有认同感，信息处理动机则会增加（实验 3 和 4）。

Attitudes ambivalentes dans un processus de communication : un modèle intégré

Résumé

Dans un processus de communication qui concerne un sujet cible (ce sur quoi la communication porte) et une source, les attitudes actuelles (positives ou négatives) envers la cible ou la source influencent les effets de la communication. Les gens peuvent aussi présenter des attitudes ambivalentes (positives et négatives) envers la cible ou la source, mais les conséquences de telles attitudes ambivalentes sur les effets de communication restent peu claires dans la littérature en communication. Cette étude tente de combler cette lacune en explorant l'influence des attitudes ambivalentes envers la cible et la source sur les effets de communication et en proposant un modèle intégré pour démontrer que les attitudes ambivalentes encouragent le traitement systématique (expériences 1 et 2) et que l'identification avec la cible ou la source encourage encore plus le traitement motivé chez les gens ambivalents (expériences 3 et 4).

Mots clés : attitudes, ambivalence, approbateurs, persuasion, traitement motivé, traitement systématique

Ambivalente Einstellungen im Kommunikationsprozess: Ein integratives Modell

In einem Kommunikationsprozess, der ein Zielsubjekt (über das kommuniziert wird) und eine Quelle beinhaltet, beeinflussen bestehende Einstellungen (positiv oder negativ) gegenüber dem Ziel oder der Quelle die Kommunikationseffekte. Menschen können allerdings auch ambivalente Einstellungen (positiv oder negativ) gegenüber dem Zielsubjekt oder der Quelle haben, deren Wirkungen in der Kommunikationsforschung bislang ungeklärt sind. Vorliegende Studie versucht diese Lücke zu schließen, indem der Einfluss ambivalenter Einstellungen gegenüber einem Ziel und einer Quelle auf Kommunikationseffekte untersucht wird. Damit einhergehend wird ein integratives Modell vorgeschlagen, welches zeigt, dass ambivalente Einstellungen ein systematisches Verarbeiten fördern (Experiment 1 und 2), und dass die Identifikation mit dem Ziel oder der Quelle außerdem die Motivation zur Verarbeitung bei ambivalenten Menschen unterstützt. (Experiment 3 und 4)

Schlüsselbegriffe: Einstellungen, Ambivalenz, Befürworter, Persuasion, motivierte Verarbeitung, systematische Verarbeitung

커뮤니케이션 과정에서의 양립적인 태도들: 통합모델

요약

타겟 주제 (소통되어야 하는 존재)와 소스를 포함하는 커뮤니케이션 과정에서 이들 주제와 소스들에 대한 현존하는 태도들은 (긍정적 또는 부정적) 커뮤니케이션 효과들에 영향을 미친다. 사람들은 또한 타겟과 소스들에 대한 양립적인 (긍정적 그리고 부정적) 태도들을 유지할 지 모르나, 커뮤니케이션 효과들에 대한 이러한 양립적인 태도들의 함의들은 커뮤니케이션 연구에서 불확실한 상태로 남아있다. 본 연구는 네가지 실험을 단행하여 커뮤니케이션 효과들에 있어 타겟과 소스에 대한 양립적인 태도들을 연구하는 것에 의해 이러한 간극을 메우고자 하였다. 구체적으로, 실험 1 과 2 는 양립적인 태도들이 체계적인 과정화를 장려한다는 것을 증명하기 위하여, 실험 3 과 4 는 타겟과 소스들과의 동일성은 양립적인 사람들 사이에서의 동기화된 과정화를 더욱 장려한다는 것을 증명하기 위햐여 통합모델을 제안하는것에 의해 이를 단행하였다.

Las Actitudes Ambivalentes en un Proceso de la Comunicación

Un Modelo Integrado

Resumen

En un proceso de comunicación que involucra un sujeto objetivo (qué está siendo comunicado) y una fuente, las actitudes existentes (positivas o negativas) hacia el objetivo o la fuente influencian los efectos de la comunicación. La gente puede sostener también actitudes ambivalentes (positivas y negativas) hacia el objetivo o la fuente, pero las implicancias de esas actitudes ambivalentes en la comunicación de los efectos permanece poco clara en la investigación de la comunicación. Este estudio trata de cubrir ese vacío mediante la exploración de las actitudes ambivalentes hacia el objetivo y la fuente sobre los efectos de la comunicación y propone un modelo integrado para demostrar que las actitudes ambivalentes promueven el procesamiento sistemático (Experimentos 1 y 2) y que la identificación con el objetivo o la fuente estimula aún más el procesamiento motivado entre las personas ambivalentes (Experimentos 3 y 4).

Palabras claves: Actitudes, Ambivalencia, Apoyo, Persuasión, Procesamiento motivado, Procesamiento sistemático